

HANDMADE B&W EMULSION RECIPE

by Lindsay McIntyre

SOLUTION A

Distilled water, ml	45
Knox food, Gelatin, gr	6,25
Potassium Bromide, gr	25
Potassium Iodide,	
ml of 15% solution*	5,5

*15% Iodide solution = 15g in 100ml of distilled water

SOLUTION B

Distilled water, ml	157,5
Silver Nitrate, gr	20

SOLUTION C

Distilled water, ml	42,4
Knox food Gelatin, gr	16,25

SOLUTION D

Potassium Bromide,	
ml of fresh 0.8% solution	4,5

Total Volume for shredding, ml	250,4
Total Gelatin for shredding, gr	22,5
(Gelatin concentration)	9%

In red darkroom light.

COOK:

Swell gelatin. Heat to 50 degrees. Add Iodide and bromide. Heat solution A and B to 70 degrees. Add half of B to A as a dump. Then add approx 5-7 mL each 40 sec for 10 minutes, stirring by hand for 10 seconds after each addition. Remove from heat. Stir constantly and cool quickly in an ice bath (after 5 minutes at 60 degrees, after 10 minutes at 50 degrees, after 15 min at 45 degrees). Replace to heat when at 45 degrees and hold at 45-50 degrees for 15 minutes, still stirring constantly by hand. At 30 minutes post-silver addition, solution C (at 45 degrees) is added. Stir an additional 2 minutes by hand. Cool quickly in ice water bath and refrigerate for a day.

WASH:

'Noodled' and washed in four 30 minute baths. First three baths are tap water at 8-10 degrees. Last bath is distilled water at 3 degrees. 2 hours total. Noodles placed in a new stainless steel container for reheating.

Sensitizing and digestion: add Solution D to cold noodles before remelting. Digest at 60 degrees C for 90 minutes stirring by hand every 5 minutes. Cool to coat. I spray coat but brushing works equally well from my tests.

NOTE:

Some of the better results I got were using two parts of this same emulsions together – the base emulsion was digested for 60 minutes and the top layer was digested for 90 minutes. The 90 minute emulsion seems to be about 20 ASA but fogs a tiny bit. The 60 minute emulsion is about 10 ASA and very clean and the 90/60 emulsion seems to be about 12 or 16 ASA and really clean and sharp. Adding TAI just before coating to the 90 minute emulsion seems to lower the fog but also the speed so I opt not to use it and just use either the 90 or the 90/60.